

Chapter 1

Partners in Pollution Prevention:

TWO YEARS OF ACHIEVEMENT

From its beginning, IDEM's Office of Pollution Prevention and Technical Assistance has worked in partnership with Indiana industries. The sharing aspect of the program was apparent from its first endeavors. Many companies serve as case studies, and many more are willing to share technical information. If decreases in the use of toxic substances are to be realized, it is

necessary to maintain a positive relationship with toxics users. Simply providing businesses with information about pollution prevention is not enough. Change results from getting to know businesses—learning their problems, attitudes, processes and motivations—and then using these tools. Effective awards and recognition programs encourage the essential interaction required to build the necessary working relationships.

Environmental partnerships produce consensus approvals, feasible goals and a comprehensive assessment of opportunities to improve the productivity and profitability of businesses through pollution prevention. Partnerships also motivate participants to be creative in finding solutions to common problems and to set up procedures for measuring results and sharing successful approaches with others.

The Office of Pollution Prevention and Technical Assistance establishes and supports cooperation with Indiana businesses by:

- Developing and implementing special initiatives with specific environmental and educational goals on issues of special interest to OPPTA or, as part of broader IDEM initiatives;



Photo by DNR Photographer Richard Fields

IDEM WORKS IN PARTNERSHIP WITH INDUSTRY, ACADEMIA, AND STATE, LOCAL AND FEDERAL ORGANIZATIONS TO CREATE A CLEANER, HEALTHIER ENVIRONMENT FOR OUR CHILDREN AND FUTURE GENERATIONS.

- Developing and implementing recognition programs to acknowledge businesses that go beyond regulatory requirements when achieving compliance with environmental rules;
- Conducting outreach and educational workshops to help various business sectors achieve compliance and sometimes go beyond the requirements of environmental regulations;
- Forming partnerships with Indiana leaders in pollution prevention;
- Establishing continuing roundtable discussions for information sharing;
- Obtaining financial support in the form of grants from the U.S. Environmental Protection Agency to maintain supplemental funding for OPPTA; and
- Awarding a significant portion of federal funding to municipalities and businesses in the form of pollution prevention challenge grants.

Since 1997, OPPTA has been successful in working to achieve Indiana environmental goals by utilizing public and private sector partnerships.

The accomplishments described in this report cover two years of achievement that would not have been possible without the relationships formed with industry, academia, and state, local and federal organizations.

1998 Indiana Governor's Toxics Reduction Challenge

This program came together after many hours of work with the business community and the Indiana Chamber of Commerce. The challenge was kicked off on April 24, 1998, as part of Governor Frank O'Bannon's address to the Sixth Annual Governor's Conference on the Environment. The Governor's Toxics Reduction Challenge established a goal and a set of objectives for Indiana's manufacturers and businesses to achieve. There are no binding commitments. The Governor's Challenge is a *voluntary* commitment from industry, business, local government and quasi-governmental organizations to support the state's efforts to meet the established goals. So far 58 organizations, which include 75 individual facilities, accepted the challenge.

The Challenge

- Reduce toxic chemical releases to the air and water from 1995 levels by:
 - a. 50% by December 31, 2000 in large urban areas for carcinogens and persistent, bioaccumulative, toxic chemicals;
 - b. 60% statewide by December 31, 2002, for these chemicals; and
 - c. 50% statewide by December 31, 2002, for all toxic chemicals reported in the Toxic Release Inventory; and
- Energetically help the state reach these goals through efforts emphasizing pollution prevention within the organization and/or in cooperation with other organizations.

Efforts of Some Organizations to Achieve Toxics Reduction Challenge Goals

- ! **ABT Co. Inc.** eliminated the use of methylene chloride in its cold cleaning tank.
- ! **Allison Engine Company** eliminated methylene chloride from one of its vapor degreasing operations.
- ! **BICC** converted most of its toluene cleaning systems to non-hazardous systems.
- ! **Earth Day Indiana** publicized the Challenge in its newsletter.
- ! **Exide Corporation** is planning to eliminate a hazardous waste stream from its wastewater discharge. It is also studying solvent losses throughout its plant.
- ! **Ispat Inland Inc.** joined the voluntary mercury reduction initiative in Northwest Indiana.
- ! **Jasper Rubber** is researching the replacement of zinc-based solutions used in mixed rubber cooling tanks.
- ! **MPL Corporation** lowered styrene emissions by reducing resin consumption.
- ! **Madison Chemical** reduced sodium nitrate consumption by 10,000 pounds and glycol ether use by 20,000 pounds in 1998. They also virtually eliminated chromium and molybdenum in its products by converting to silane compounds.
- ! **Northern Indiana Public Service Company** made excellent progress in reducing polychlorinated biphenyls and mercury. In 1998, NIPSCO removed 97.2% of all PCBs from their facilities. They also collected 83 pounds of mercury from their facilities. The mercury was sent off-site for recycling.
- ! **Reilly Industries** reduced ammonia emissions by approximately 25%.
- ! **3M Company** in Hartford City installed a capture system for hazardous air pollutants which should result in a 20% drop in air emissions.
- ! **Viking Formed Products** reduced styrene emissions by approximately 50%.
- ! **Visteon Automotive Systems** (an enterprise of Ford Motor Company) eliminated all aerosols containing methyl ethyl ketone. They also eliminated the use PCBs and mercury containing pressure switches on coolant systems.
- ! **Wabash National** converted much of its indoor lighting to low-mercury containing fluorescent lighting.

Protecting Children from Environmental Threats



In July 1997, as part of Governor O'Bannon's multi-agency *Building Bright Beginnings* campaign, IDEM began working to make Indiana a safer place for all Hoosier children. IDEM developed a campaign called "Protecting Children From Environmental Threats" that consists of three initiatives:

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| 1 Reduce Toxic Substances. | 2 Educate Families. | 3 Involve Children. |
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IDEM's campaign is a collaborative effort spanning the offices within IDEM, the Governor's Office, four additional state agencies, two state universities, private sector businesses, community volunteers and the AmeriCorps program. The Office of Pollution Prevention and Technical Assistance was designated as the leader of the campaign. As part of IDEM's initiative to reduce children's exposure to toxic chemicals, OPPTA developed and implemented lead and mercury awareness programs to educate Hoosiers on the sources and environmental risks associated with these toxic chemicals.

Lead Awareness Program

In February 1998, Governor O'Bannon began the Lead Awareness Program by announcing IDEM would dedicate funds to assist six counties where testing identified the highest concentrations of elevated blood lead levels in children. The areas identified were Marion, Lake, St. Joseph, Allen, Elkhart and Vanderburgh counties. In these areas, grants totaling \$106,000 were made available to the local government to educate at-risk families in

neighborhoods with the highest risk of lead exposure to children. Lead exposure can inhibit a child's emotional and intellectual development. An additional \$172,000 was provided to offer free, lead risk assessor training to 108 community-based lead inspectors. After completing a one-week training course, the trainees became lead risk assessors. In exchange for the free training, participants committed to perform at least 20 free, lead risk assessments for families with children or child care centers in their community. To date, nearly 1,500 free, lead risk assessments have been performed statewide.

Simple Steps for Families

A Simple Steps for Families program was also developed and announced in August 1998. The program provides tangible options for Hoosier families to make their homes safer for children. The goal of the program is to educate families on how to prevent exposure to common household dangers, such as secondhand smoke, mercury, lead, radon, pesticides and other toxic household chemicals. The program is designed to involve children in the learning process and uses a variety of tools such as brochures, place mats, magnets and pencils to teach kids and parents the simple steps they can take to make the home a safer place.

Mercury Awareness Program

The Mercury Awareness Program was created in October 1998 as a joint effort with the Regional Household Hazardous Waste Task Force. The purpose of the Mercury Awareness Program is to inform Hoosiers about the serious health threats associated with mercury. Mercury, a widely-used toxic chemical, threatens the central nervous system and can cause serious, irreversible damage to human sight, hearing and motor skills. With a goal of collecting as much mercury and



mercury-containing items as possible from Hoosier households, over \$200,000 was dedicated to the Mercury Awareness Program between October 1998 and June 1999. The money funded the salary of a full-time Mercury Awareness Program coordinator and the mercury collection and recycling effort. IDEM created posters, brochures, magnets and other informational tools to help Hoosiers identify sources of mercury around the household. IDEM and the Task Force partnered with numerous businesses and local organizations and achieved:

- Mercury collection events in each of Indiana's 92 counties,
- The collection of over 2,100 pounds of elemental and other mercury devices and debris, and
- Ongoing mercury collection and education programs in 70% of Indiana's counties.

5-Star Environmental Recognition Program for Child Care Facilities

In December 1998, the Office of Pollution Prevention and Technical Assistance developed and implemented the 5-Star Environmental Recognition Program for Child Care Facilities. This program is the first of its kind in the nation! It recognizes facilities that go above and beyond the requirements of environmental, health and safety regulations. Facilities can earn one, three or five stars based on how they address lead, radon, asbestos, pesticides, mercury, indoor air quality, fire safety, recycling, energy efficiency and environmental education. During the first three rounds of awards, IDEM recognized 50 facilities in 35 cities.

OPPTA also distributed a self-assessment to all licensed child care facilities in the state. The assessment helps facilities determine where possible environmental threats exist at their facility and provides suggestions on ways to improve the children's environment. In addition, OPPTA completed a guidance manual, *Protecting Children from Environmental Threats: Guidance for Indiana Child Care Facilities*. This manual describes regulations pertaining to child care centers, homes and ministries, and provides ideas on how to go above and beyond the regulations. Workshops will be held statewide during the next two years.

Technical assistance has been provided to improve compliance rates. AmeriCorps members and Lilly Fellows from Indiana University's School of Public and Environmental Affairs visited facilities to help them understand the requirements and how they can participate in the 5-Star Environmental Recognition Program.

In March 1999, OPPTA attended the Governor's Conference for Early Childhood and presented a session on the 5-Star Environmental Recognition Program for Child Care Facilities.

Mercury Thermostat Reduction and Recycling Program

In the winter of 1996, a Mercury Thermostat Reduction and Recycling Program was developed for the heating, ventilation, air conditioning and refrigeration industry. As part of the program, HVAC-R contractors and suppliers agree to a pledge indicating the company's commitment to protecting customers and the environment from the dangers of mercury. Program participants pledge to:



- Educate the public and customers on the hazards of mercury,
- Encourage customers to replace unusable or unwanted mercury-containing thermostats with digital or mercury-free units,
- Return mercury-containing thermostats to their supplier for proper recycling by the Thermostat Recycling Corporation, and
- Keep a supply of mercury-free thermostats available.

Approximately 69 HVAC-R contractors and 10 HVAC-R suppliers are participating in this voluntary program. The Thermostat Recycling Corporation began accepting mercury-containing thermostats from Indiana HVAC-R suppliers in November 1997.

Fiber Reinforced Plastic Compliance Assistance

Starting in early 1998, the Office of Pollution Prevention and Technical Assistance and the Clean Manufacturing Technology and Safe Materials Institute worked closely with IDEM's Office of Air Management to provide compliance information and pollution prevention options to manufacturers subject to new federal air emission requirements. The fiber reinforced plastic industry was subject to new changes in air permit rules. The changes include a change in mathematical factors used for calculating styrene emissions, an upcoming federal Maximum Achievable Control Technology requirement, and a case-by-case Indiana Maximum Achievable Control Technology requirement for new sources of air emissions. The Office of Pollution Prevention and Technical Assistance promoted pollution prevention as the preferred approach to environmental compliance for the fiber reinforced plastic industry. OPPTA:

- Attended the Small Business Assistance Program National Conference to share with other states' compliance assistance centers how Indiana dealt with the change in emission factors and how OPPTA provided background information to IDEM's Office of Air Management for its permitting process.
- Provided a grant to the Clean Manufacturing Technology and Safe Materials Institute to write a compliance assistance manual for the fiber reinforced plastic industry.
- Offered to create a 5-Star Environmental Recognition Program for this industry. (There seems to be very little interest, possibly due to the recent introduction of IDEM's 100% Club as well as a trade association program.)
- Provided a Pollution Prevention Challenge Grant to Altec Engineering for the development of a resin application system that reduces volatile organic compound emissions.

In September 1998, Altec Engineering provided OPPTA with the final report on flow-coating that documents how a flow-coat gun actually works in a manufacturing environment rather than a laboratory. The report can be ordered from OPPTA at (800) 451-6027, press 0, and ask for ext. 2-8172, or call (317) 232-8172.

- Participated in an Office of Air Management workgroup to develop a fiber reinforced plastic initiative to address the recent changes in permit rules.
- Helped develop a packet of information for the industry and the public.
- Created several web pages for the industry with links to information on a variety of issues including emission factor models, hazardous waste management, the federal Maximum Achievable Control Technology development, Occupational Safety and Health Administration regulations, pollution prevention and other issues facing the industry.

Internal Pollution Prevention Training

In addition to external outreach and training efforts, OPPTA develops and facilitates training for IDEM staff and others. The training encourages participants to support pollution prevention efforts and incorporate pollution prevention concepts into agency decision making. To keep current with legislative revisions to laws that affect the Office of Pollution Prevention and

Technical Assistance programs, the traditional introductory pollution prevention course that was developed over five years ago was reformatted and updated in 1998. OPPTA introduced the new two-hour course to the Partners for Pollution Prevention speaker's bureau on March 25, 1998. Classes were then scheduled biweekly and on an as-needed basis for IDEM staff and any interested external customers.

During the past two years the new introductory pollution prevention course was taught ten times to a total of 122 IDEM employees. The two-hour training session, taught in a classroom environment, includes the basic pollution prevention and clean manufacturing definitions, discussion topics and video presentations. Ongoing, mandatory staff compliance and technical assistance confidentiality training was conducted as required.

Six Industrial Pollution Prevention Technical Seminars were provided to approximately 170 IDEM staff members in 1998. These seminars, which are summarized below, addressed pollution prevention in practice. Qualified, practicing, industrial representatives or environmental managers provided pertinent information to participants. Seminars included chemical, manufacturing or product information that focused on pollution prevention and regulatory concerns.

1998

Industrial Pollution Prevention Technical Seminars

- ! United Technology Automotive, Berne, Indiana, conducted a Pollution Prevention Showcase on May 27 in the Indiana Government Center South Auditorium, Indianapolis. This event was sponsored by the Indiana Clean Manufacturing Technology and Safe Materials Institute. The program highlighted **conductive plastics for electrostatic painting** using Graphite Fibril Technology. The program was attended by 55 staff and guests from the public sector.
- ! Mr. S. Jean Hall, process engineer, CMTI, presented the **Fiber Reinforced Plastic Initiative** on June 11 in the OPPTA Conference Room, Indianapolis. This initiative concentrates efforts of key companies in open-mold fiberglass manufacturing on innovative technologies to reduce styrene emissions. Twenty-eight staff attended this presentation.
- ! Ms. Cyndi Wagner, chief of IDEM's Underground Storage Tank Section, presented an overview of the Indiana 1998 **UST upgrade requirements** on July 9 in the OPPTA Conference Room, Indianapolis. The UST regulations enhance spill prevention in the removal of old, potentially leaking USTs. Proper oversight of new installations have significant impacts on pollution prevention. Twenty staff participated in this seminar session.
- ! Mr. Rick J. Bauer, professional assistant for Coating Application Technology, CMTI, reported on his progress in **pollution prevention training for Indiana's wood furniture manufacturing personnel** on August 6 in the OPPTA Conference Room, Indianapolis. The program provides guidance on proper spray finishing equipment operation and its effects on reducing air emissions. The presentation examined the positive and negative impacts the National Emission Standards for Hazardous Air Pollutants for wood furniture manufacturers has had on the industry. A total of 22 staff attended.
- ! Ms. Cheri Storms, Ms. Joyce Vallance, and Mr. David Lawrence, IDEM compliance assistance specialists, presented the Compliance and Technical Assistance **Vehicle Maintenance Workshop** in the OPPTA Conference Room, Indianapolis, on August 21. This presentation explained information covered in *Compliance Manual for Indiana's Vehicle Maintenance Shops*, a manual that includes IDEM, Department of Transportation, and Occupational Safety and Health Administration rules and regulations, and waste prevention and minimization recommendations. This workshop was attended by 23 staff.
- ! Ms. Paula Smith, Compliance and Technical Assistance Program branch chief; Mr. Steven Boggs, IDEM compliance assistance specialist; and Ms. Stephanie Biehn, representing the Indiana Regional Household Hazardous Waste Task Force; presented a seminar on the state's **Mercury Awareness Program** on October 14 in the OPPTA Conference Room, Indianapolis. This program offers comprehensive education and outreach regarding the public health risks of exposure to mercury and free statewide collection of mercury waste. Twenty-one staff participated in this seminar.

Regulatory Integration of Pollution Prevention

In fall 1997, the Office of Pollution Prevention and Technical Assistance obtained a \$60,000 federal grant with a 50% matching requirement to implement a regulatory integration of pollution prevention program. OPPTA selected a leading national consultant to assist in the project. The consultant, *Kerr, Greiner and Associates*, has done similar work in other states, including Texas, Iowa, Ohio and Illinois. The contract was finalized in June 1999, and work on developing recommendations began in August 1999.

The purpose of pollution prevention regulatory integration is to weave pollution prevention into

the fabric of core regulatory programs at IDEM. By integrating pollution prevention to the drivers of day to day operation of regulatory programs we can set a stage that will allow for the daily consideration of pollution prevention opportunities throughout the agency. However, given the fact that pollution prevention cannot be required by Indiana law, the focus of the pollution prevention integration project will be on management drivers of core program functions. These include: policies and procedures, work plans, job descriptions, employee performance ratings and standard operating procedures. Specialized pollution prevention training will be a cornerstone effort of this program.

Hospital Initiative

In summer 1998, the Office of Pollution Prevention and Technical Assistance began working with the Indiana Hospital and Health Association and other trade groups to develop a model medical waste management program. The U.S. Environmental Protection Agency and the American Hospital Association signed a memorandum of understanding calling for dramatic reductions in waste generation from hospitals by the year 2005.

The Hospital Advisory Group meets quarterly to discuss waste management and other environmental issues. The new air rule for hospital incinerators, called the Maximum Achievable Control Technology rule, is now in effect. As a result many hospitals will close their incinerators. Waste management is an important issue for any hospital, but especially for those that can no longer burn their waste. OPPTA will continue to promote pollution prevention, especially where mercury is concerned, within the health care network.

Drycleaner Initiative

The Clean Air Act Amendments of 1990 included perchlorethylene drycleaning in its list of regulated sectors. Only a few of Indiana's drycleaners fully understood environmental compliance issues. IDEM committed to assisting this industry in achieving regulatory compliance with several pollution prevention education and outreach activities.

The drycleaner initiative began in 1995 and is an ongoing project. A comprehensive compliance manual for drycleaners and brochures for neighbors and customers were developed under a grant-supported endeavor with the Indiana Drycleaning and Laundry Association. Several educational workshops were conducted to introduce interested



industry members to the compliance assistance program offered by OPPTA and to make them aware of the Indiana 5-Star Environmental Recognition Program.

Vehicle Maintenance Initiative

To assist the vehicle maintenance industry, the Office of Pollution Prevention and Technical Assistance undertook an initiative to assist small businesses that must comply with the regulations that affect them. The initiative included:

- Developing a *Compliance Manual for Indiana's Vehicle Maintenance Shops*, written in an easy-to-read style, that addresses safety as well as environmental regulations;
- Developing a *Collision Repair/Auto Refinishing* chapter (currently under development) that will supplement the existing *Compliance Manual for Indiana's Vehicle Maintenance Shops*;
- Creating a 5-Star Environmental Recognition Program for Vehicle Maintenance Shops;
- Conducting educational workshops statewide; and
- Conducting confidential, compliance assistance site visits to vehicle maintenance shops upon request.

The initiative has been announced in a variety of ways, including news media, trade association newsletters and meetings, industry service providers and mass mailings. All components of this initiative are provided to shops free of charge.

A comprehensive *Compliance Manual for the Collision Repair/Auto*



Refinishing Industry is nearing completion, with an anticipated publication in winter of 2000. OPPTA staff have met numerous times with industry representatives throughout the state to get their input and insight, as well as having them review sections as they are drafted. Once the manual is finished, copies will be available free of charge for any interested shop, supplier or other affected person. In addition to the manual, free training workshops will be scheduled around the state in 2000.

International Organization for Standardization 14001 Pilot Projects Initiative

The International Organization for Standardization 14001 is a voluntary international standard that describes a comprehensive environmental management system to provide companies with flexibility to meet national environmental standards in a global marketplace. The “core elements” of ISO-14001 are:

- An environmental policy, signed by senior management, that includes commitments to compliance, pollution prevention and continual improvement;
- Objectives and targets developed by the organization for itself based on its assessment of “significant environmental aspects,” compliance requirements and consideration of stakeholder interests;
- Implementation and control; and
- Performance monitoring and measurement, and senior management review.

The core elements can be applied to a wide range of entities, including industrial and commercial facilities, governmental agencies and nonprofit organizations.

The Office of Pollution Prevention and Technical Assistance established an environmental management systems pilot project to determine the impact of management systems like ISO-14001. Eight Indiana facilities are participating in the pilot projects (see page 10). Participation is voluntary.

Participating facilities received either a \$5,000 or \$8,000 grant from IDEM to determine the impact of ISO-14001 on compliance rates, pollution prevention implementation and stakeholder involvement in corporate decision making. Data on the impacts are collected from the Indiana facilities and are being shared with the University of North Carolina as part of a national environmental management system study.

Indiana Facilities Participating in ISO-140001 Pilot Projects

! CMI - Precision Mold Inc., Bristol
! CMI - Wabash Cast Inc., Wabash
! Ferro Corporation Liquid Coatings & Dispersions Division, Plymouth
! Kobelco Metal Powder of America Inc., Seymour

! Nishikawa Standard Company (New Haven Facility), Fort Wayne
! Othy Inc., Warsaw
! Plasfinco Inc., North Vernon
! Thermoset Lord Chemical Products (formerly Thermoset Plastics Inc.), Indianapolis

Local Pollution Prevention Initiative

In April 1998, the Office of Pollution Prevention and Technical Assistance awarded \$5,000 matching fund grants to Publicly Owned Treatment Works in six communities in the state. These POTW pollution prevention challenge grants were given to municipalities for the development and implementation of projects that promote pollution prevention as a means to address influent loading issues at the POTW. The cities of Elkhart, Kokomo, Princeton, Madison, North Vernon and Indianapolis received grants. The final reports for

the grant projects were not received at the time of drafting this report. However, preliminary reports indicate that POTW personnel from each grant recipient received pollution prevention training. Five of the grant recipients indicate regularly scheduled meetings between the POTW personnel and the up-system industrial users are occurring. The focus of the meetings is to discuss influent loading issues and identify pollution prevention options to address them.

Pollution Prevention Week

As part of Indiana's 1998 celebration of Pollution Prevention Week, Governor Frank O'Bannon signed a proclamation to announce the week of September 21-27, 1998 as "Pollution Prevention Week" in Indiana. The Fifth Annual Governor's Awards for Excellence in Pollution Prevention were presented during Pollution Prevention Week at the First Indiana Pollution Prevention Conference and Trade Show. IDEM, in cooperation with the Indiana Clean Manufacturing Technology and Safe Materials Institute, hosted local forums on pollution prevention. Former OPPTA Assistant Commissioner Tom Neltner lead sessions on September 17 and 18, 1998 in Jasper, Evansville and New Albany. Former IDEM Commissioner John Hamilton lead a roundtable



discussion with the Elkhart Environmental Managers Association on September 25, 1998. The agency's Children's Health Initiative, mercury collections, AmeriCorps, and the Governor's Toxics Reduction Challenge were discussed at the sessions.

Continuing the tradition, the 1999 celebration of pollution prevention was carried out similar to 1998. September 20-26 was declared Pollution Prevention Week by Governor O'Bannon. The Sixth Annual Governor's Awards for Excellence in Pollution Prevention were presented at the Second Annual Indiana Pollution Prevention Conference and Trade Show. A poster commemorating Indiana Pollution Prevention Week was also developed.